

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A composition comprising an isolated peptide, wherein said peptide is immobilized on a solid phase following synthesis of the peptide on a synthesis solid support and cleavage of the peptide therefrom, said peptide having at least one epitope capable of binding antibodies to a protein comprising the epitope(s),
wherein the peptide comprises an amino acid sequence of six to 50 amino acids, and the sequence comprises two Cys residues which are separated from each other by at least two but fewer than twenty non-Cys amino acid residues and wherein thiol groups of the Cys residues are reversibly protected from oxidation by a chemically reversible means resistant to highly acidic cleavage conditions used for peptide cleavage from the synthesis solid support.
2. (Previously presented) The composition of claim 1, wherein the Cys residues of the peptide are protected from oxidation by ethylcarbamoyl, acetamidomethyl, 3-nitro-2-pyridinesulfinyl or diphenyl-4-pyridylmethyl.
3. (Previously presented) The composition of claim 2, wherein the Cys residues of the peptide are protected from oxidation by ethylcarbamoyl.
4. (Previously presented) The composition of claim 1, further comprising a third Cys residue at the N-terminus of the peptide, wherein the third Cys residue is not protected from oxidation.
5. (Previously presented) The composition of claim 4, wherein the N-terminus sequence of the peptide is Cys-Gly-Gly.

6. (Previously presented) The composition of claim 4, wherein the amino acid at the C-terminus of the peptide is amidated.

7. (Previously presented) The composition of claim 1, wherein the Cys residues are separated from each other by four to six non-Cys residues.

8. (Previously presented) The composition of claim 1 wherein the peptide is capable of binding antibodies to a retroviral transmembrane protein.

9. (Previously presented) The composition of claim 8, wherein the retroviral protein is HIV-1 gp41 and the peptide comprises at least seven contiguous amino acids within the following sequence:

Arg-Ile-Leu-Ala-Val-Glu-Arg-Tyr-Leu-Lys-Asp-Gln-Gln-Leu-Leu-Gly-Ile-Trp-Gly-Cys-Ser-Gly-Lys-Leu-Ile-Cys (SEQ ID NO:1).

10. (Previously presented) The composition of claim 9, wherein the N-terminus of the peptide comprises amino acids added to enhance specific binding of the antibodies to the protein comprising the epitope(s), wherein at least one of said additional amino acids is a third Cys residue not protected from oxidation.

11. (Previously presented) The composition of claim 10, wherein the third Cys residue not protected from oxidation is the N-terminal residue of the peptide.

12. (Previously presented) The composition of claim 11, wherein the N-terminus amino acid sequence of the peptide is Cys-Gly-Gly.

13. (Previously presented) The composition of claim 11, wherein the amino acid residue at the C-terminus of the peptide is amidated.

14. (Withdrawn) The peptide of claim 8, wherein the retroviral protein is HIV-2 gp36 and the peptide comprises at least seven contiguous amino acids within the following sequence:

Arg-Val-Thr-Ala-Ile-Glu-Lys-Tyr-Leu-Gln-Asp-Gln-Ala-Arg-Leu-Asn-Ser-Trp-Gly-Cys-Ala-Phe-Arg-Gln-Val-Cys (SEQ ID NO:2).

15. (Withdrawn) The peptide of claim 14, wherein the N-terminus comprises amino acids added to enhance immunospecific reactivity, wherein at least one of said additional amino acids is a Cys residue not protected from oxidation.

16. (Withdrawn) The peptide of claim 15, wherein the Cys not protected from oxidation is the N-terminal residue.

17. (Withdrawn) The peptide of claim 16, wherein the N-terminus sequence is Cys-Gly-Gly.

18. (Withdrawn) The peptide of claim 16, wherein the C-terminus amino acid is amidated.

19. (Withdrawn) The peptide of claim 8, wherein the retroviral transmembrane protein is HTLV-I gp21 and the peptide comprises at least about seven contiguous amino acids within the following sequence:

Gln-Asn-Arg-Arg-Gly-Leu-Asp-Leu-Leu-Phe-Trp-Glu-Gln-Gly-Gly-Leu-Cys-Lys-Ala-Leu-Gln-Glu-Gln-Cys (SEQ ID NO:4).

20. (Withdrawn) The peptide of claim 19, wherein the N-terminus comprises amino acids added to enhance immunospecific reactivity, wherein at least one of said additional amino acids is a Cys residue not protected from oxidation.

21. (Withdrawn) The peptide of claim 20, wherein the Cys not protected from oxidation is the N-terminal residue.

22. (Withdrawn) The peptide of claim 21, wherein the N-terminus sequence is Cys-Gly-Gly.

23. (Withdrawn) The peptide of claim 21, wherein the C-terminus amino acid is amidated.

24. (Withdrawn) The peptide of claim 8, wherein the retroviral protein is HTLV-II gp21 and the peptide comprises at least seven contiguous amino acids within the following sequence:

Gln-Asn-Arg-Arg-Gly-Leu-Asp-Leu-Leu-Phe-Trp-Glu-Gln-Gly-Gly-Leu-
Cys-Lys-Ala-Ile-Gln-Glu-Gln-Cys (SEQ ID NO:5).

25. (Withdrawn) The peptide of claim 24, wherein the N-terminus comprises amino acids added to enhance immunospecific reactivity, wherein at least one of said additional amino acids is a Cys residue not protected from oxidation.

26. (Withdrawn) The peptide of claim 25, wherein the Cys not protected from oxidation is the N-terminal residue.

27. (Withdrawn) The peptide of claim 26, wherein the N-terminus sequence is Cys-Gly-Gly.

28. (Withdrawn) The peptide of claim 26, wherein the C-terminus amino acid is amidated.

29-47. (Canceled)

48. (Previously presented) The composition of claim 1, wherein the highly acidic cleavage conditions comprise hydrofluoric acid (HF) or trifluoroacetic acid (TFA).

49. (Currently amended) The compositions of claim 1, wherein the solid phase is selected from the group consisting of

- a microtiter plate;
- a glass bead;
- a latex bead ~~entrapped on a microporous membrane~~;
- a tube;
- a filter; and
- a chromatographic surface.

50. (New) The composition of claim 49, wherein the latex bead, said bead having the immobilized peptide, is entrapped on a microporous membrane.